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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/150,947F

DATE: 05/29/2003

TIME: 13:07:45

Input Set : A:\SEQUENCE LISTING 09150947.txt

Output Set: N:\CRF4\05292003\I150947F.raw

4 <110> APPLICANT: Kaempfer, Raymond
5 Arad, Gila
7 <120> TITLE OF INVENTION: BROAD SPECTRUM PYROGENIC EXOTOXINS ANTAGONISTS VACCINES
10 <130> FILE REFERENCE: A31967-PCT-USA-A 066031.0102
12 <140> CURRENT APPLICATION NUMBER: 09/150,947F
13 <141> CURRENT FILING DATE: 1998-09-10
15 <150> PRIOR APPLICATION NUMBER: PCT/IL97/00438
16 <151> PRIOR FILING DATE: 1997-12-30
18 <150> PRIOR APPLICATION NUMBER: ISRAEL 119938
19 <151> PRIOR FILING DATE: 1996-12-30
21 <160> NUMBER OF SEQ ID NOS: 18
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 12
27 <212> TYPE: PRT
28 <213> ORGANISM: Staphylococcus aureus
30 <400> SEQUENCE: 1
31 Thr Asn Lys Lys Lys Val Thr Ala Gln Glu Leu Asp
32 1 5 10
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 12
37 <212> TYPE: PRT
38 <213> ORGANISM: Staphylococcus aureus
40 <400> SEQUENCE: 2
41 Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp
42 1 5 10
45 <210> SEQ ID NO: 3
46 <211> LENGTH: 10
47 <212> TYPE: PRT
48 <213> ORGANISM: Staphylococcus aureus
50 <400> SEQUENCE: 3
51 Lys Lys Lys Ala Thr Val Gln Glu Leu Asp
52 1 5 10
55 <210> SEQ ID NO: 4
56 <211> LENGTH: 10
57 <212> TYPE: PRT
58 <213> ORGANISM: Staphylococcus aureus
60 <400> SEQUENCE: 4
61 Lys Lys Lys Val Thr Ala Gln Glu Leu Asp
62 1 5 10
65 <210> SEQ ID NO: 5
66 <211> LENGTH: 13
67 <212> TYPE: PRT

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```

68 <213> ORGANISM: Staphylococcus aureus
70 <220> FEATURE:
71 <221> NAME/KEY: LIPID
72 <222> LOCATION: (1)...(1)
73 <223> OTHER INFORMATION: N-lauryl cysteine residue
75 <400> SEQUENCE: 5
76 Cys Thr Asn Lys Lys Lys Val Thr Ala Gln Glu Leu Asp
77 1 5 10
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 13
82 <212> TYPE: PRT
83 <213> ORGANISM: Staphylococcus aureus
85 <220> FEATURE:
86 <221> NAME/KEY: LIPID
87 <222> LOCATION: (1)...(1)
88 <223> OTHER INFORMATION: N-lauryl cysteine residue
90 <400> SEQUENCE: 6
91 Cys Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp
92 1 5 10
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 24
97 <212> TYPE: PRT
98 <213> ORGANISM: Staphylococcus aureus
100 <400> SEQUENCE: 7
101 Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp Tyr Asn Lys Lys
102 1 5 10 15
103 Lys Ala Thr Val Gln Glu Leu Asp
104 20
107 <210> SEQ ID NO: 8
108 <211> LENGTH: 36
109 <212> TYPE: PRT
110 <213> ORGANISM: Staphylococcus aureus
112 <400> SEQUENCE: 8
113 Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp Tyr Asn Lys Lys
114 1 5 10 15
115 Lys Ala Thr Val Gln Glu Leu Asp Tyr Asn Lys Lys Lys Ala Thr Val
116 20 25 30
117 Gln Glu Leu Asp
118 35
121 <210> SEQ ID NO: 9
122 <211> LENGTH: 14
123 <212> TYPE: PRT
124 <213> ORGANISM: Staphylococcus aureus
126 <220> FEATURE:
127 <221> NAME/KEY: DISULFID
128 <222> LOCATION: (1)...(1)
130 <221> NAME/KEY: DISULFID
131 <222> LOCATION: (14)...(14)

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W--> 133 <400> 9

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Input Set : A:\SEQUENCE LISTING 09150947.txt

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134 Cys Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp Cys

135 1 5 10

138 <210> SEQ ID NO: 10

139 <211> LENGTH: 14

140 <212> TYPE: PRT

141 <213> ORGANISM: Staphylococcus aureus

143 <220> FEATURE:

144 <221> NAME/KEY: MOD_RES

145 <222> LOCATION: (1)...(1)

146 <223> OTHER INFORMATION: D-alanine

148 <221> NAME/KEY: MOD_RES

149 <222> LOCATION: (14)...(14)

150 <223> OTHER INFORMATION: D-alanine

W--> 152 <400> 10

153 Ala Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp Ala

154 1 5 10

157 <210> SEQ ID NO: 11

158 <211> LENGTH: 13

159 <212> TYPE: PRT

160 <213> ORGANISM: Staphylococcus aureus

162 <220> FEATURE:

163 <221> NAME/KEY: ACETYLTATION

164 <222> LOCATION: (1)...(1)

166 <221> NAME/KEY: MOD_RES

167 <222> LOCATION: (13)...(13)

168 <223> OTHER INFORMATION: D-alanine

W--> 170 <400> 11

171 Tyr Asn Lys Lys Lys Ala Thr Val Gln Glu Leu Asp Ala

172 1 5 10

175 <210> SEQ ID NO: 12

176 <211> LENGTH: 239

177 <212> TYPE: PRT

178 <213> ORGANISM: Staphylococcus aureus

180 <400> SEQUENCE: 12

181 Glu Ser Gln Pro Asp Pro Lys Pro Asp Glu Leu His Lys Ser Ser Lys

182 1 5 10 15

183 Phe Thr Gly Leu Met Glu Asn Met Lys Val Leu Tyr Asp Asp Asn His

184 20 25 30

185 Val Ser Ala Ile Asn Val Lys Ser Ile Asp Gln Phe Leu Tyr Phe Asp

186 35 40 45

187 Leu Ile Tyr Ser Ile Lys Asp Thr Lys Leu Gly Asn Tyr Asp Asn Val

188 50 55 60

189 Arg Val Glu Phe Lys Asn Lys Asp Leu Ala Asp Lys Tyr Lys Asp Lys

190 65 70 75 80

191 Tyr Val Asp Val Phe Gly Ala Asn Tyr Tyr Tyr Gln Cys Tyr Phe Ser

192 85 90 95

193 Lys Lys Thr Asn Asp Ile Asn Ser His Glu Thr Asp Lys Arg Lys Thr

194 100 105 110

195 Cys Met Tyr Gly Gly Val Thr Glu His Asn Gly Asn Gln Leu Asp Lys

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196          115          120          125
197 Tyr Arg Ser Ile Thr Val Arg Val Phe Glu Asp Gly Lys Asn Leu Leu
198          130          135          140
199 Ser Phe Asp Val Gln Thr Asn Lys Lys Lys Val Thr Ala Gln Glu Leu
200 145          150          155          160
201 Asp Tyr Leu Thr Arg His Tyr Leu Val Lys Asn Lys Lys Leu Tyr Glu
202          165          170          175
203 Phe Asn Asn Ser Pro Tyr Glu Thr Gly Tyr Ile Lys Phe Ile Glu Asn
204          180          185          190
205 Glu Asn Ser Phe Trp Tyr Asp Met Met Pro Ala Pro Gly Asp Lys Phe
206          195          200          205
207 Asp Gln Ser Lys Tyr Leu Met Met Tyr Asn Asp Asn Lys Met Val Asp
208          210          215          220
209 Ser Lys Asp Val Lys Ile Glu Val Tyr Leu Thr Thr Lys Lys Lys
210 225          230          235

```

213 <210> SEQ ID NO: 13

214 <211> LENGTH: 10

215 <212> TYPE: PRT

216 <213> ORGANISM: Artificial Sequence

218 <220> FEATURE:

219 <223> OTHER INFORMATION: Consensus sequence

W--> 221 <221> NAME/KEY: UNSURE

222 <222> LOCATION: (2)...(4)

223 <223> OTHER INFORMATION: Any amino acid

W--> 225 <221> UNSURE

226 <222> LOCATION: (6)...(6)

227 <223> OTHER INFORMATION: Any amino acid

W--> 229 <221> UNSURE

230 <222> LOCATION: (9)...(9)

231 <223> OTHER INFORMATION: Any amino acid

W--> 233 <400> 13

W--> 234 Lys Xaa Xaa Xaa Thr Xaa Gln Glu Xaa Asp

235 1 5 10

238 <210> SEQ ID NO: 14

239 <211> LENGTH: 10

240 <212> TYPE: PRT

241 <213> ORGANISM: Artificial Sequence

243 <220> FEATURE:

244 <223> OTHER INFORMATION: Consensus sequence

W--> 246 <221> NAME/KEY: UNSURE

247 <222> LOCATION: (3)...(8)

248 <223> OTHER INFORMATION: Any amino acid

W--> 250 <400> 14

W--> 251 Lys Lys Xaa Xaa Xaa Xaa Xaa Xaa Leu Asp

252 1 5 10

255 <210> SEQ ID NO: 15

256 <211> LENGTH: 10

257 <212> TYPE: PRT

258 <213> ORGANISM: Artificial Sequence

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```

260 <220> FEATURE:
261 <223> OTHER INFORMATION: Consensus sequence
W--> 263 <221> NAME/KEY: UNSURE
264 <222> LOCATION: (1)...(1)
265 <223> OTHER INFORMATION: Any charged amino acid
W--> 267 <221> UNSURE
268 <222> LOCATION: (2)...(3)
269 <223> OTHER INFORMATION: Any amino acid
W--> 271 <221> UNSURE
272 <222> LOCATION: (4)...(4)
273 <223> OTHER INFORMATION: Any hydrophobic amino acid
W--> 275 <221> UNSURE
276 <222> LOCATION: (5)...(5)
277 <223> OTHER INFORMATION: Any amino acid
W--> 279 <221> UNSURE
280 <222> LOCATION: (6)...(6)
281 <223> OTHER INFORMATION: Any hydrophobic amino acid
W--> 283 <221> UNSURE
284 <222> LOCATION: (7)...(8)
285 <223> OTHER INFORMATION: Any polar amino acid
W--> 287 <221> UNSURE
288 <222> LOCATION: (9)...(9)
289 <223> OTHER INFORMATION: Any hydrophobic amino acid
W--> 291 <400> 15
W--> 292 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
293 1 5 10
296 <210> SEQ ID NO: 16
297 <211> LENGTH: 12
298 <212> TYPE: PRT
299 <213> ORGANISM: Artificial Sequence
301 <220> FEATURE:
302 <223> OTHER INFORMATION: Consensus sequence
W--> 304 <221> NAME/KEY: UNSURE
305 <222> LOCATION: (1)...(2)
306 <223> OTHER INFORMATION: Any amino acid
W--> 308 <221> UNSURE
309 <222> LOCATION: (4)...(6)
310 <223> OTHER INFORMATION: Any amino acid
W--> 312 <221> UNSURE
313 <222> LOCATION: (8)...(8)
314 <223> OTHER INFORMATION: Any amino acid
W--> 316 <221> UNSURE
317 <222> LOCATION: (11)...(11)
318 <223> OTHER INFORMATION: Any amino acid
W--> 320 <400> 16
W--> 321 Xaa Xaa Lys Xaa Xaa Xaa Thr Xaa Gln Glu Xaa Asp
322 1 5 10
325 <210> SEQ ID NO: 17
326 <211> LENGTH: 12

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/150,947F

DATE: 05/29/2003
TIME: 13:07:46

Input Set : A:\SEQUENCE LISTING 09150947.txt
Output Set: N:\CRF4\05292003\I150947F.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; Xaa Pos. 2,3,4,6,9
Seq#:14; Xaa Pos. 3,4,5,6,7,8
Seq#:15; Xaa Pos. 1,2,3,4,5,6,7,8,9
Seq#:16; Xaa Pos. 1,2,4,5,6,8,11
Seq#:17; Xaa Pos. 1,2,5,6,7,8,9,10
Seq#:18; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11

VERIFICATION SUMMARY

DATE: 05/29/2003

PATENT APPLICATION: US/09/150,947F

TIME: 13:07:46

Input Set : A:\SEQUENCE LISTING 09150947.txt

Output Set: N:\CRF4\05292003\I150947F.raw

L:133 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:152 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:170 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11
L:221 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:225 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:229 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:233 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:246 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:250 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14
L:251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:263 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:267 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:271 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:275 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:279 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:283 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:287 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:291 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:304 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:308 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:312 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:316 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:320 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:333 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:337 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:341 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:353 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:358 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:362 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:366 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:370 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:374 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:378 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:382 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:386 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:387 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0